REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the remarks that follow.

Claims 4 and 6 are amended to delete the phrase "...and or preventing" in claims 4 and 6 and the phrase "for preventing and/or delaying skin aging..." in claim 6. Claims 1-3, 5 and 11-25 were previously cancelled.

I. INFORMATION DISCLOSURE STATEMENT (IDS)

The PTO indicated that certain references submitted in the IDS filed January 17, 2006, were lined through as not considered for failure of the PTO to receive the references from the International Bureau. The PTO lined through four references: WO 98-47479 (A1), FR 2778565 (A2), Gogly et al. (A3), and Saleem et al. (A4).

Applicants note that two of the lined-through references are of record in this application. Specifically, Saleem et al. was initialed in the IDS filed March 2, 2006, and Gogly et al. was cited by the examiner in the Restriction Requirement of September 30, 2009.

Applicants have submitted herewith copies of WO 98-47479 and FR 2778565 via supplemental IDS. Applicants note that WO 98-47479 corresponds to Msika et al. (US 6,146,616), which was cited by the examiner in the outstanding Office Action.

II. ENABLEMENT AND INDEFINITENESS REJECTIONS

1.1: The PTO states that claims 4, 6-10 and 30-34 are not enabled by the specification as filed. Specifically, it is the PTO's contention that the specification would not have allowed the skilled artisan to use the inventive methodology to "prevent sagging of skin".

Without acquiescing to the propriety of the rejection, and in an effort to advance prosecution, Applicants have amended the rejected claims to overcome the lack of enablement rejection. Thus, the rejection has been obviated and should be removed.

1.2: The PTO states that claims 6 and 7 are not enabled because the specification would not have allowed the skilled artisan to use the claimed invention to prevent and/or

delay skin aging. Without acquiescing to the propriety of the rejection and solely for the purpose of advancing prosecution, Applicants have amended rejected claim 6 to delete the objected phrase and to obviate the lack of enablement rejection. The rejection of claim 7 is moot because it depends from claim 6 which has been amended to address the section 112-first paragraph rejection.

1.3: The PTO states that claims 6 and 7 are not enabled because the specification would not have allowed the skilled artisan to use the claimed invention to prevent stretch marks. Without acquiescing to the propriety of the rejection and solely for the purpose of advancing prosecution, Applicants have amended rejected claim 6 to delete the objected phrase and to obviate the lack of enablement rejection. The rejection of claim 7 is moot because it depends from claim 6 which has been amended to address the section 112-first paragraph rejection.

1.4: The PTO states that claims 4, 6-10 and 33-34 are indefinite in view of the phrase "lupeol-rich," which in the PTO alleges is not defined and is a relative term. Applicants respectfully disagree.

Contrary to the PTO's opinion, the objected phrase is well defined in the specification as filed. Thus, paragraph [0063] of the published application (US Publication NO. 2006/0216249) states, "lupeol-rich extract has a lupeol content of greater than 30% by weight, advantageously greater than 50% by weight and even more advantageously between 70 and 100% by weight." Thus, the specification clearly explains what Applicants consider to be a "lupeol-rich extract". Furthermore, because the lupeol content in the extract is being defined as the weight percent of the total extract, the PTO's allegation that the objected phrase is relative is improper, too.

The section 112-second paragraph rejection is improper, therefore, and Applicants respectfully request the PTO to withdraw the same.

III. OBVIOUSNESS REJECTION

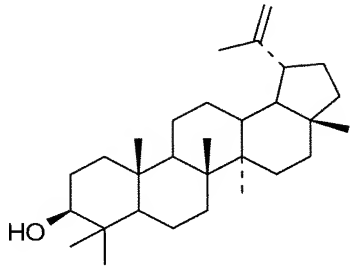
Claims 4, 6, 9-10 and 33-34 are rejected as being unpatentable over Msika et al. (US 6,146,616), in view of Murad (US 5,972,999). Specifically, the PTO contends that Msika

discloses an anti-elastase composition containing lupine oil, which the PTO contends should inherently contain lupeol. See page 10 of the Office Action. To support its theory of inherency, the PTO refers to US publication No. 2004/0121030 (Piccirilli et al) as teaching extraction of lupeol from "white lupin", the same species of lupin used by Msika to extract the disclosed lupine oil.

Thus, the PTO is understood to state that lupine oil must contain lupeol. This assertion, however, is incorrect for at least the following reasons.

Msika teaches that its antielastase composition contains lupine oil or one or more fractions thereof. See col. 1, lines 60-63. According to Msika, the lupine oil is extracted from lupine meals and/or seeds, particularly by direct pressing of lupine seeds. See col. 1, lines 63-65. Msika further teaches that "lupine oil has a particularly high content of **polyphenol,** β-carotene .....[and] advantageously the [disclosed] antioxidant and/or antielastase composition which contains phenol derivatives extracted from lupine oil." See col. 2, lines 19-28. Nowhere, does Msika teach or suggest that lupine oil contains lupeol as alleged by the examiner.

As disclosed in the present specification, a **lupeol is not a phenol or phenol derivative.** The lupeol structure appears below, wherein no phenol moiety appears (reproduced from paragraph [0003] of the published application):



lupeol

As stated above, Msika explicitly states that its composition contains phenol derivatives extracted from lupine oil, which oil is taught to have a particularly high content of **polyphenol(s)**. Msika's lupine oil composition, therefore, would not be understood by the skilled artisan to contain a lupeol-rich extract as claimed.

Further support for Applicants proposition that lupine oil does not contain a lupeol-rich extract as claimed, stems from Example 1 in Msika and the accompanying table. See table in col. 4. The table illustrates the composition of lupine oil extracted using the process disclosed in Example 1 of Msika. This table clearly shows the α-lupeol content of lupine oil to be between 0.1 to 1%. Surely, such an extract, cannot satisfy the limitation "lupeol-rich extract", i.e., a lupeol content of greater than 30% by weight as described in paragraphs [0030] and [0063] of the published application.

While Piccirrilli discloses a process for extracting lupeol, Piccirrilli specifically discloses extraction of lupeol from lupin **pods**. In sharp contrast, Example 1 in Msika discloses a method for extracting lupine oil in which the seeds can be **decorticated**, i.e., the pods or skins are removed from the seeds, prior to extraction of the lupine oil. See col. 4, lines 10-12.

The table below illustrates the percent amount of various components found in a classic composition of lupine oil, lupine concentrate, lupine unsaponifiable, and lupeol rich extract:

	Lupine oil	Lupine Concentrate	Lupine unsaponifiable	**Lupeol-rich extract**
Lupeol content (g/100g)	**0.14**	3.0	6.9	**84.7**
Sterol content (g/100g)	1.05	40	50	**12.2**
Tocopherol content (g/100g)	0.152	9	7.2	**0**
Carotene content (mg/100g)	26	22	838	**0**
Polyphenol derivatives content (mg/100g)	23	40	762	**0**

This table clearly illustrates that lupine oil contains a very small amount of lupeol, while the claimed lupeol-rich extract has greater than 80% lupeol.

Based on the above remarks and the teachings of Msika and Piccirrilli, the skilled artisan would have readily concluded that lupine oil disclosed by Msika is not a lupeol-rich extract as claimed. That is, lupine oil contains a much lower content of lupeol than the claimed lupeol-rich extract used in the inventive methodology for improving cicatrisation.

Murad is cited for its disclosure that appearance of stretch marks on skin due to damage of the collagen and elastin proteins in skin. As such, Murad could not remedy, however, the deficiencies of Msika. Accordingly, the combination of Msika and Murad fail to defeat the patentability of the claimed invention.

Accordingly, Claim 4 is non-obvious over the cited references.

Dependent claims 7 and 8 are rejected over the combined teachings of Msika, Murad and the Hernandez-Perez technical article, or over the combined teachings of Msika, Murad and Herman (US 5,190, 979).

The Hernandez-Perez article is cited to teach stretch marks in pregnant women while Herman is cited to teach oral dosage in the form of a mouthwash. As stated above, the combination of Msika and Murad fail to defeat the patentability of independent claim 4 whose limitations are incorporated in dependent claims 7 and 8. The dependent claims are patentable, therefore, for at least the same reasons mentioned above for claim 4. The teachings of Hernandez-Perez and Herman do not remedy the deficiencies of Msika and Muard. Accordingly, they do not defeat patentability of claims 7 and 8.

In sum, Applicants maintain non-obviousness of the claims because lupine oil fractions do not contain significant amounts of lupeol, since:

- Msika discloses a lupeol content below 1% by weight,
- Piccirilli discloses that lupeol is extracted from pods of lupine seeds, and
- Msika says that the lupin oil fractions are obtained from lupine seeds which can be decorticated (and thus are without pods).

Thus, all pending claims are patentable over the cited references, and Applicants respectfully request reconsideration and withdrawal of the section 103 rejection.

CONCLUSION

Having advanced credible remarks in support of patentability of the claimed invention, Applicant respectfully requests the Examiner to withdraw the rejections. Applicant

believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned attorney if any issues remain in the present application.

Respectfully submitted,

Date 10-Aug-2010 By /Rouget F. Henschel/

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The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Intense Pulsed Light in the Treatment of Striae Distensae

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BACKGROUND. Intense Pulsed Light (IPL) is a noncoherent, nonlaser, filtered flashlamp, emitting a broadband visible light. Its efficacy has been reported recently in the treatment of photodamaged facial skin, promoting the production of neo collagen and ordering of elastic fibers. We don't know however, its efficacy in the treatment of striae distensae.

OBJECTIVE. To assess gross and microscopical changes that occur in the striae distensae when treated by IPL.

METHODS. A prospective study was carried out in 15 women, all of them having late stage striae distensae of the abdomen. Five sessions of IPL were performed in each one, once every two weeks. Skin biopsies and before and after photographs were taken of all the patients. Data concerning skin features (number of stretch marks in a square of 5 cm per side, sum of all the stretch marks to determine the total length, discolorations and general appearance) were all assessed before each session and at the end of the study. Microscopical changes were all carefully assessed. For the statistical analysis a "t" test for small samples was used.

RESULTS. All patients showed clinical and microscopical improvement in each one of the parameters assessed. The "t" test for small samples showed a statistically significative difference ($p < 0.01$) in the post treatment dermal thickness.

CONCLUSION. Striae distensae improved clinically and microscopically after IPL. It seems to be a promising method of treatment for this common problem with minimal side-effects, a wide safety margin and no downtime.

E. HERNÁNDEZ-PÉREZ, MD, E. COLOMBO-CHARRIER, MD, AND E. VALENCIA-IBIETT, MD HAVE INDICATED NO SIGNIFICANT INTEREST WITH COMMERCIAL SUPPORTERS.

STRIAE DISTENSAE are common cutaneous lesions characterized terminally by linear bands of atrophic skin.[1] They are commonly seen in adolescents and young adults especially pregnant women.[1–3] They are thin and pink initially, but with further development they usually enlarge both in length and width and acquire a vivid reddish-purple appearance.[2] Finally as time goes by, striae assume a white sunken appearance.[1–3] Part of the difficulty in determining the etiology of striae is the variability in the clinical situations in which they arise.[3] It has been suggested that extracellular matrix is altered or damaged with continuous and progressive stretch such as in pregnancy, growth spurt of adolescence, obesity, weight lifting, or in association with the use of potent topical or systemic corticosteroids.[4]

Histopathological findings vary depending on the age of the lesions.[1,5] Early lesions show superficial and deep perivascular infiltrate of lymphocytes and sometimes of eosinophils, as well as widely dilated venules and edema in the upper part of the dermis. Fully developed lesions show scant infiltrate of lymphocytes around venules. Bundles of collagen in the upper third of the reticular dermis are thinned and aligned parallel to the skin surface. Elastic fibers seem to be increased in number and packed together as a consequence of loss of collagen bundles. In the late stage, these findings are exaggerated with a thin epidermis devoid of rete ridges.[5] Loss of elastic tissue accompanies loss of collagen; elastic fibers appear to be increased in sections specially stained, an illusion caused by marked thinning of collagen bundles.[5] Losses of both collagen and elastic tissue are requisite for the development of these conditions.[5] At the end, there is a decrease in the thickness of the dermis.[6]

There is no widely accepted surgical procedure for improving the appearance of stretch marks. The use of topical tretinoin has yielded variable results.[3,7] In the study of Kang et al.[4] topical tretinoin improved the clinical appearance of stretch marks during the active stage. However, this treatment works poorly if at all on mature striae (striae alba).[3] Laser therapy has been advocated as a treatment for stretch marks, as well as for different forms of scars.[8–10] More recently microdermabrasion has been suggested for their treatment.[11–15]

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IPL is characterized by a noncoherent filtered flashlamp with a very broadband spectrum (515–1200 nm), whose source emits a visible polychromatic pulsed light of high intensity. It is used in the treatment of telangiectasias,[16] photoepilation,[17] lentigines, vascular malformations[18,19] and tattoo elimination. Recently it has been used in Civatte's poikiloderma[20] and for facial aging.[21–23] In a recent study, we found that facial photodamage was clinically and microscopically improved using IPL.[23–26] In dermis, the elastosis was replaced by a more orderly neo collagen and this improvement was more important from the bottom toward the surface. These results have prompted us to carry out a new study, this time using IPL in striae distansae.

The aim now is to establish that IPL can provoke clinical and microscopical improvement in the stretch marks.

Materials and Methods

This prospective study was carried out in 15 patients, all of Hispanic origin, whose ages varied between 22 and 42 years (avg. 34.4 years). All of them were multiparous and had indoor occupations. There was no history of stretch marks treatments previously. Twelve of them (80%) were Fitzpatrick type IV and 20% Fitzpatrick type III. All the patients gave informed consent for treatments, biopsies, and photographs. Patients with stretch marks in the abdominal region were included. Within an area marked with a square of 5 cm per side, always in the same place, at the left side of the umbilicus, we determined the number of stretch marks, the widest area of the striae and the sum of the length of all of them in order to obtain a total measure. In spite of the fact that we didn't looked only for a determined type of striae, in all the subjects the striae were white in color. The clinical data were gathered by three different observers: the patient himself, a nurse, and the physician. The clinical damage pretreatment was classified according to a scale that was: + mild, + + moderate, and + + + severe. Clinical data in connection with the improvement of the striae were assessed immediately prior to each IPL session, every two weeks, as well as two weeks after the last treatment. These data were classified in a scale by crosses: 0 no improvement, + mild, + + moderate, + + + good, + + + + very good. The machine used was a VascuLight Plus of Lumenis, with a wavelength between 515 and 1200 nm, energy output 10 at 90 J/cm2 and pulse length from 2.5 to 25 ms. The parameters of the machine were determined according to the type of our patients' skin. The cutoff filter most commonly used was one of 645 nm (12 cases or 80%). In all the patients we began with a fluence according to the type of skin (30 J/cm^2). This was then increased from 10% to 20% in each session, according to the response of the skin, mostly burning and erythema at the end of each treatment. Each shot consisted of 2 pulses (2.7 and 4 ms) separated by a delay (20 ms). Pregnant patients as well as those lactating, with Cushing's disease and persons with history of anabolics intake and congenital disease were excluded. Side-effects were carefully noted.

Five sessions of IPL were carried out in each patient, once every two weeks. We took 2 pictures of every patient, one immediately before the first session, and one two weeks after the fifth one. Two 4 mm punch biopsies were taken, both of the same stretch mark, one before the first treatment and one more two weeks after the last session. The follow-up was carried out 3 months after the last session of IPL. As an additional treatment, each patient was given a sunscreen SPF 15, recommending also to avoid sun exposure. We occluded the eyes with gauzes and protective eye goggles. Then, we applied enough quantities of a chilled colorless inert gel into the area, forming a layer 3–5 mm between the skin and the cutoff filter. The shots were made one after the other, immediately adjacent. Local anesthesia, in any form, was not used. The microscopy was evaluated by two dermatopathologists, one of them the senior author, in a blinded manner. The other dermatopathologist was not involved in the rest of the study. The stains used were H&E and Verhoeff's for elastic fibers. The epidermal and dermal thickness were measured in each biopsy pre and post treatment, through an optic micrometer; the results were compared in an individual form and average of the total was taken out. These results were submitted to statistical analysis using the Excel "t" test for small paired samples, "t" of one tail. The degree of atrophy of the epidermis was measured using a scale to indicate if such finding was: 0 non existent; mild + ; moderate + + ; or severe + + + 0.

The microscopic findings that we considered in dermis were: (a) elastosis; (b) edema; (c) telangiectasias; (d) inflammation; (e) quality of the collagen fibers. To measure them we used the following scale: 0 none; + mild; + + moderate; + + + severe. With respect to the collagen fibers, we took into consideration their staining properties and fibrillar nature. Using Verhoeff's stain, the apparent number of elastic fibers in the dermis was measured through the following scale: + few; + + moderate; + + + abundant. All of these data were gathered by reviewing each time 10 microscopical fields under 10 × magnification. Data so obtained was compared with that reviewed at the end of the study, with the second biopsy.

Results

On an average, the time spent per session was 10 min and the number of shots were 26. Comparison of the clinical features pre and post treatment appears summarized in the Table 1. A decrease in the number of striae from a total of 117 to a total of 94 was noted. (On average, from 7.8 to 6.26 per patient). The sum of the length also decreased from a total of 375 cm to a total of 239 cm (On average, from 25 cm to 15.93 cm per patient). Applying the "t" test for the statistical analysis, we found that this change was significant $p < 0.01$. (Figures 1–4). The measurement of the widest

Table 1. Comparison of Clinical Features Pre and Post-Treatment

Patient	*Number of Striae Pre/Post*	*Sum of Length * Pre/Post*	*Widest Area** Pre/Post*	*Avg of Clinical Improvement****
1	11/11	35/35	4/4	++
2	5/5	24.5/10	3/3	++
3	7/4	17/8	1/1	++++
4	8/4	24.5/6	2/2	++++
5	7/5	24/20	5/5	+++
6	11/10	35/34	3/3	++
7	5/5	24.5/11	4/4	+++
8	7/5	17/9	2/2	+++
9	8/5	24.5/6.5	1/1	+++
10	8/5	24/21	3/3	++++
11	12/11	35/34	5/5	++
12	6/5	24.5/11	2/2	++
13	7/5	17/9	2/2	++++
14	8/4	24.5/5.5	1/1	+++
15	7/5	24/19	4/4	++++
Sum	117/94	375/239	42/42	
Avg	7.8/6.26	25/15.93	2.8/2.8	

*In cm
**In mm
***Average of the three observers

portion of the striae remained the same; however, because of the improvement in the post-treatment assessment, some of the striae were barely discernible. Pretreatment clinical aspect of the striae was considered as moderate in 40% and severe in 60%. Otherwise, the average of the clinical improvement as noted post-treatment by the three observers was moderate in 40%, good in 20%, and very good in 40%. (Figure 5)

Microscopic Findings

The epidermis showed pretreatment atrophy in all the cases. This atrophy was considered severe in 60%, moderate in 20%, and, mild in 20%. Post-treatment atrophy changed to mild in 40%, moderate in 20%, and severe in 20%. No atrophy was noted in 20%. The epidermal thickness was increased, as compared to the post-treatment, assessment, on an average from 0.17 to 0.49 mm. The statistical analysis showed a "t" test <0.05 (Table 2). Several changes were noted pre- and post-treatment in the dermis. Elastosis pretreatment was 60% severe, 20% moderate, and 20% mild.

Figure 1. Striae distensae in the abdomen, before treatment.

Figure 2. Striae distensae of the same patient after treatment. Note the improvement of the striae. There is some hyperpigmentation in the sides of the square. In the center, the site of the biopsy.

Figure 3. Numerous striae distensae in the abdomen of this patient before treatments.

Post-treatment elastosis was 60% mild, 20% moderate, and 20% severe. Pre-treatment edema was 60% severe, 20% moderate, and 20% mild. Post-treatment edema was 60% mild, 20% moderate, and 20% severe. Telangiectasias did not show any change pre and post-treatment, being 20% severe, and 80% moderate in both evaluations. Pre-treatment inflammation was considered moderate in 80%. In 20% no inflammation was noted. Post-treatment inflammation was considered moderate in 20% and mild in 60%. In 20% no inflammation was noted. The pretreatment quality of the collagen fibers was considered as having moderate damage in 60%, and severe in 40%. Post-treatment, we found the collagen as having mild damage in 60%, and moderate in 40%. Dermal thickness was the parameter that showed the most important improvement. On an average, pre- and post-treatment thickness varied from 2.03 mm to 3.31 mm (Table 2). In the statistical analysis the "t" test showed a $p < 0.01$, confirming that the difference was significant among the thickness of the dermis before and after the treatment (Figures 6-9). Only two patients (13.3%) experienced some minor and transitory burning sensation. Post inflammatory pigmentation was observed in 6 patients (40%). The pigmentation resolved in about 6 weeks using 1% hydrocortisone cream. The apparent number of elastic fibers using Verhoeff's stain was considered pretreatment as few in 90% and moderate in 10%. Comparing these data with those of the second biopsy, we found the same figures: few in 90% and moderate in 10%.

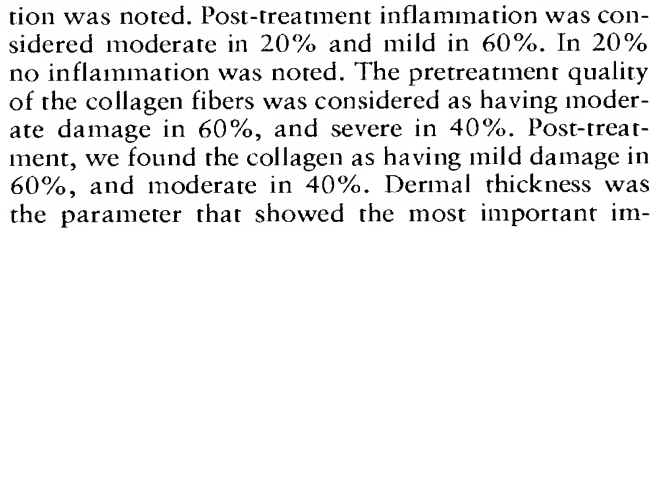

Figure 4. Same patient improvement of the striae distensae after treatments.

Figure 5a/5b. Clinical assessment showed improvement. In general, the improvement was good and very good in 60%. In none the results were considered as "no improvement."

Discussion

IPL seems to be a good option for the improvement of striae distensae. Regardless of the fact that all the treated striae were white in color, that is to say in a

Table 2. Changes in Epidermis and Dermis Before and After IPL in mm

Patient	*Epidermal Thickness Pre/Post*	*Dermal Thickness Pre/Post*
1	0.02/0.05	3.23/4.12
2	0.07/1.03	2.19/4.62
3	0.05/0.05	2.05/6.74
4	0.08/0.11	1.05/4.5
5	0.05/0.05	1.5/3.3
6	0.03/0.04	2.00/3.61
7	0.05/1.01	3.01/4.05
8	0.06/0.09	1.31/3.03
9	0.09/1.02	1.96/4.01
10	0.04/0.09	2.31/3.06
11	0.08/1.01	3.11/4.08
12	0.77/1.22	1.93/3.69
13	0.18/0.22	1.64/4.42
14	0.12/0.25	2.17/3.91
15	0.92/1.17	1.02/3.31
Sum	2.61/7.41	30.48/60.42
Avg	0.17/0.49	2.03/3.31

late stage, all our patients showed very satisfactory changes. On an average, the improvement was good and very good in 60%. In none of them there were results considered as "no improvement." Almost all the clinical features assessed showed improvement, among them, the number of striae and the sum of the total length of the striae. Difference between the length of pre and post-treatment striae was considered statistically significant ($p < 0.01$). Almost all the parameters evaluated at the microscopy showed variable degrees of improvement. Some of them, even subjective, are worth to emphasize: improvement in the epidermal atrophy, as well as in the dermal elastosis, edema, inflammation and quality of the collagen fibers. Telangiectasias did not improved. This is a curious fact given that IPL is known to act on the blood vessels. Perhaps using different parameters for the IPL? Nonetheless all our cases were clinically white in color ("late stage"). The epidermal thickness was increased on an average from 0.17 to 0.49 mm. Such difference was considered statistically significant ($p < 0.05$). The dermal thickness showed the most important improvement at the end of the treatment. Such difference on an average varied from 2.03 mm to 3.31 mm, being considered statistically highly significant ($p < 0.01$). Given that we did not observe any change post-treatment in the number of elastic fibers, we must assume that the increase in the dermal thickness was primarily as a result of increase in the collagen fibers. Collagen fibers seemed

Figure 6. The epidermis is atrophic and flattened. There is important damage of the collagen fibers. The dermis is thin (H&E 4×).

Figure 7. After treatments, in the same patient, the epidermis is thickened with reappearance of the rete ridges. The collagen fibers seems more normal and the dermis is also thickened (H&E, 4×).

Figure 8. Pre-treatment biopsy. The epidermis is completely atrophic. The collagen fibers are irregulars and the dermis is thin (H&E, 4×).

to acquire a more fibrillar aspect and took up more pink stain. A mild increase in the epidermal thickness, as well as a very important increase in the dermal thickness and improvement in the quality of the collagen fibers, probably accounts for the clinical improvement noted by all the three observers. This coincides with the loss of collagen observed in the late stage of striae distensae.[1,5,6] Elastic fibers seemed not to change at the end of the study. Should it be possible to get that change after modifying the parameters of the IPL? Perhaps increasing the number of sessions? In any case, could this modify the end clinical result as shown in this study?

We must point out that only 5 sessions were performed, all of them in a very limited area of the skin. It allowed us to compare the treated areas against the non treated adjacent skin or contralateral skin. Nevertheless, all our patients showed good clinical and microscopical improvement. Post-inflammatory pigmentation can be avoided by using a lower fluence or perhaps increasing the delay between the pulses.

Conclusion

IPL seems to be a promising alternative for the treatment of striae distensae. It is worth to remark its lack of important side-effects, including the benefit of no downtime. Our study reveals clinical and microscopical improvement in this frequent cosmetic problem.

Acknowledgments: The authors wish to thank Manuel Gavidia MD, Professor of Biostatistics of the Evangelic University of El Salvador, who performed the statistical analysis. Hassan Abbas Khawaja, MD kindly reviewed the manuscript.

Figure 9. Same patient. The epidermis and dermis looks thickened. The collagen seems much more normal (H&E, 4×).

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